

Application No. 10/694,539
Amendment Dated July 29, 2005
Reply to Office Action of April 29, 2005

REMARKS/ARGUMENTS

Claims 1-26 are pending, with Claims 1 and 22 independent. By this Amendment, the Specification and Claims 1, 10 and 22 are amended and Claims 25 and 26 are added. No new subject matter is added by this Amendment. Favorable reconsideration is respectfully requested in view of the foregoing amendments and the following remarks.

The amendments to the Specification and claims are made for the purpose of addressing informalities only, and are not required to overcome any prior art cited by the Office Action. In particular, the second paragraph of page 8 is amended to change "modulation symbol frequency" to "modulation symbol sequence" for editorial clarity. Claims 1 and 22 are amended for proper and antecedent basis of the sampled baseband signal. Claim 10 is amended as suggested by the Examiner for clarity.

ALLOWABLE SUBJECT MATTER

Applicants acknowledge the Examiner's indication that Claims 3-21, 23 and 24 contain allowable subject matter. However, Applicants respectfully submit that all of pending Claims 1-26 are allowable for at least the reasons set forth below.

FORMAL MATTERS

Claim 10 stands objected to because of a minor informality. This objection is respectfully traversed, as the informality has been corrected. By this Response, Claim 10 is amended as suggested by the Examiner to obviate the objection. Withdrawal of the object is respectfully requested.

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CLAIM REJECTION

Claims 1, 2 and 22 stand rejected under 35 U.S.C. §102(b) over Ashida (U.S. Patent No. 4,801,899). This rejection is respectfully traversed for at least the reasons set forth below.

The Examiner asserts that Ashida teaches the featured recited in the rejected claims. However, Applicants respectfully submit that Ashida does not disclose or teach simulating an ideal baseband signal from the modulated symbol sequence as a reference signal, and evaluating the deviations of samples of the corrected, real baseband signal from samples of the ideal baseband signal, as recited in Claim 1. Similarly, Ashida does not disclose a digital filter for simulating an ideal baseband signal from the modulation symbol sequence, and an evaluation device for evaluating the deviations of the samples of the corrected, real baseband signal from the samples of the ideal baseband signal, as recited in independent Claim 22.

Ashida teaches to use a predistortion unit for correction of an analog basedband signal. Ashida does not disclose evaluating a deviation of samples of corrected real baseband signals from samples of an ideal baseband signal. In fact, Ashida does not simulate an ideal baseband signal. According to Claims 1 and 22, the simulation of an idea baseband signal needs the determination of a modulation symbol sequence as a reference signal. This means that starting from the received signal, first a modulation symbol sequence has to be determined, and then an ideal baseband signal is determined based on the modulation symbol sequence. See pages 8, lines 18-27.

To the contrary, in Ashida the compensation of the signal error is performed by precalculated functions. These precalculated functions use the I and the Q channel of the

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baseband signal in order to generate a compensation signal which is added to the baseband signal channel Q or I respectively. See column 4, lines 52-62. Basically, a known function is used for predistortion of the baseband signal instead of determining a characteristic of a device from a received signal only.

In the claimed invention, the correction of the real baseband signal is based on information determined from the received signal. Starting from the received signal, the modulation symbol sequence is determined by demodulation. As understood by the term "demodulation", at the end of the demodulation sequence, a digital information is obtained. However, demodulation within the meaning of Ashida is limited to a frequency shift into the analog I/Q baseband. Thus, Ashida does not teach to simulate a real baseband signal from the modulation symbol sequence as a reference signal, as recited in Claims 1 and 22.

Since Ashida does not disclose or teach simulation of an ideal baseband signal, Ashida does not disclose or teach that a corrected real baseband signal and an ideal baseband signal are used for evaluating deviations of samples thereof, as recited in Claims 1 and 22. Therefore, Ashida does not disclose at least the above-discussed features of independent Claims 1 and 22. Claim 2 depends from Claim 1 and is also distinguished from Ashida, for at least the reasons discussed above concerning Claim 1. Accordingly, Claims 1, 2, and 22 are allowable over Ashida. Withdrawal of the rejection of Claims 1, 2 and 22 under 35 U.S.C. §102 is respectfully requested.

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NEW CLAIMS

Claims 25 and 26 have been added based on a greater appreciation of the full scope of the invention. Claim 25 depends on Claim 1 and recites generating a real complex value baseband signal as the corrected, real baseband signal. Claim 26 depends from Claim 22 and recites that the corrected, real baseband signal is a real complex value baseband signal. These new claims specify that both the real baseband signal and the corrected real baseband signals are complex value baseband signals. Applicants respectfully submit that the new claims are also allowable.

CONCLUSION

For at least the reasons set forth above, it is respectfully submitted that the above-identified application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are respectfully requested.

Should the Examiner believe that anything further is desirable in order to place the application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned attorney at the telephone number listed below.


Respectfully submitted,

CAESAR, RIVISE, BERNSTEIN,
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Please charge or credit our
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